NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
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Address
by
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NORTHEAST COMMERCE AND INDUSTRY EXPOSITION
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Knowing the particular interest of those attending this Conference in the progress of business and industry in the Northeastern United States, it would appear useful for me to discuss with you the relationship of the private industrial community, and our institutions of higher learning, to the achievement of our goals in space.

As Administrator of the National Aeronautics and Space Administration, I am charged with the organization, administration, and supervision of more than 24,000 employees. During Fiscal Year 1963, the National Aeronautics and Space Administration will supervise the expenditure of nearly $4 billion -- something over $10 million a day -- in the driving effort now going forward to achieve for the United States what President Kennedy has called "pre-eminence in space", and to maintain leadership in the field of aeronautics.

The achievement of that objective requires that we learn to travel in space as we have learned to travel on the sea or in the air. We must develop which might be termed space power -- the capability to utilize space for every purpose which our national interest may require. And, to fulfill the directives established by the Congress, we must develop that competence in

space for the benefit of our own people, and of all mankind.

Vast physical resources and a great pool of skilled manpower and brainpower are being brought to bear in this effort, and more will be required before we have achieved the President's goal of establishing the United States as the "leading spacefaring nation".

Occasionally, as I look back over the decisions which each day of our accelerating activity in space has required, I cannot escape thinking how greatly the tools of progress in this scientific and technological age differ from those of the past.

One of the great early scientific discoveries -- that of the principle of buoyancy -- was made by Archimedes with nothing more than a great mind, his own body, and the water in his bath. The literature does not enlighten us as to whether he replaced his robe before he dashed forth to inform the world of his discovery.

Ben Franklin established the fact that lightning is an electrical discharge with nothing more than a kite and a key -- and, of course, a thunderstorm.

Or, to bring this more clearly in focus, Sir Isaac Newton discovered the principle of gravity by watching an apple fall from a tree. Today, in our civilian space program alone, more than 50,000 professional scientists and engineers -- in and out of NASA -- are devoted, for useful and productive purposes, to the task of overcoming gravity - a principle which Newton discovered all by himself.

The point I am trying to emphasize is this: Although creative individual effort is as important today as it has ever been, and the imagination and initiative of the individual remains the primary source of scientific and technological progress, the development and perfection of the complex equipment, the systems and subsystems, which are taking men into space are rarely, if ever, the work of single individuals. Today, teams of talented and imaginative technicians are joined in each major technological achievement.

We are emerging into the age of highly-developed, thoughtfully-organized, science-oriented industry. We are emerging also into what might be described as an intellectual society.

During the years ahead, industries will survive, and regional economies will grow and prosper, substantially in proportion to their utilization of the scientific and technological progress which is made. Also involved, I am convinced, will be an appreciation of the need to follow an intellectual leadership.

Several years ago, the growing urgency of reorienting our basic business and industrial concepts became apparent to many of us in Oklahoma, where my business interests had then led me. We organized -- and not without difficulty -- the "Frontiers of Science Foundation", to assist Oklahoma in keeping abreast of the increasing influence of scientific research and development on the industrial community.

The evidence of mushrooming federal activity in research and development, and the inevitability of its continued growth, were already apparent. I must confess, however, the doubt that any of us foresaw that this federally-sponsored activity would explode from a level of $100 million in 1940 to more than $12 billion in 1963.

Oklahoma's "Frontiers of Science Foundation" has become a highly successful effort to generate greater interest in, and appreciation of, science as a vital force in contemporary life. It is state-wide, and touches all walks of life. It involves not only business, industrial and educational leaders, but reaches down into the schools to stimulate and reward young people who are exercising their intellectual capacity.

The effects of this activity on education, on business and industrial leadership, and on the Oklahoma economy, are already apparent. It has been, and is being, studied by other states and regions for possible application in other areas of the country.

The socio-economic changes which are going on around us cannot be over-stressed if we are to cope realistically with contemporary economic circumstances. These changes may be difficult for some traditionalists to accept, but they are nonetheless vital and apparent.

I read with great interest, recently, some comments of Dr. Daniel Bell, Associate Professor of Sociology at Columbia University, in a paper entitled, "The Post-Industrial Society". In part, this is what he wrote:

"If the dominant figures of the past 150 years have been the entrepreneurs, the businessmen, and the executives, the 'new men' are the research scientists, the mathematicians, the economists and the managers of the new computer technology. The dominant institutions of the new society -- in the sense of providing the most creative challenge and enlisting its best talents -- will be the intellectual institutions. The leadership of the new society will not rest with the businessmen or the corporation as we know it, but with the research corporations, and industrial laboratories, the experimental stations and the universities....."

"To say that the major institutions of the new society will be intellectual is to say that production and business decisions will have become largely routinized; that the crucial questions regarding the growth of the economy, and its balancing, will come from research; that decision-making, because of the intricately linked nature of the consequences, will have an increasingly technical character; and that the best talents in the society, and consequently the prestige and status structures, will be based in the research and scientific sectors."

Dr. Bell's discussion implies that a corporation, or even a regional area, will remain effective, and prosper in this new age, only through the closest coordination between educational institutions and business and industry, with the institutional scientists feeding into the industrial stream the new knowledge which flows from a vast research and development effort.

As this becomes more fully realized, those regions and businesses which are quickest to comprehend the significance of these changes, and act accordingly, will be in the vanguard of progress and prosperity during the years immediately ahead.

Here in the Northeast you have an exceptional opportunity to develop the relationships between business and industry on the one hand, and the Universities and research laboratories on the other, which effective competition will demand. You have great depth in your sources of intellectual leadership. You have already made great progress in the development of "space age" industries of which scientific research and development are the core.

Further progress in this direction cannot fail to insure that this area will continue to make a developing contribution to the achievement of our goals in space.

We in NASA are eager for broad-based participation in our activities by industry in all the 50 states. The mastery of space is a national undertaking, and we would make it truly national in its accomplishment.

More than 90 percent of our procurement is outside our own organization, and we have made, and are making, a studied effort to insure effective competition for these awards. This includes competition not only between private contractors, but between outside organizations and our own field centers, for our program managers have the option in awarding developmental work of placing it within or without the organization.

The effectiveness of this private competition is evident in the extent of our work which is performed outside of NASA.

We have also taken other steps to insure that competition will not become frozen; that major contracts will not become locked in by single sources. Typical of these efforts was the establishment for the assembly of our new, very large boosters of the Michoud Operations Plant as a government installation, operated under private contracts. This will keep open for the future a continuous competition, stage-by-stage, on the work which is done there.

Relocation of major corporate activities in this manner also may have the effect of causing reexamination of traditional sub-contracting patterns, which are often based to some extent on habit and geographical considerations, thus enhancing the opportunities for new concerns to enter the competition for sub-contract work.

We are constantly seeking ways to improve the incentives for industry to provide maximum performance, and to evaluate past performance as a consideration in making future awards. This emphasis on technical competence again should have the effect of encouraging prime contractors to seek out superior contract skills, among companies of proven performance, rather than risk failure in the development of internal competence to perform tasks which they have not performed before.

Here in the Northeast -- here in Boston -- we have taken another step in our efforts to encourage competition. I refer to the establishment of a NASA office to facilitate our utilization of the resources of this region. Evidence of the significance which we attach to this activity is the fact that one of our ablest men, Franklyn W. Phillips, who was my immediate assistant in Washington until he came here, has been placed in charge.

Mr. Phillips will be concerned with bettering NASA's use of resources related to the excellent universities in the area, as well as the industry. We recognize that much of the new industry created here since World War II is the direct result of an inter-play between the scientific and engineering manpower pool which is part of the environment of the universities in new fields of technology -- particularly that of electronics.

NASA is striving, as I have suggested earlier, to create an environment in its program which will encourage further useful relationships between the universities and industry, and provide more rapid transfer of the results flowing from advanced technological development into the total economy.

I would emphasize that we, or any governmental agency, can help create an environment in which these things will take place only to the extent that the leaders in the region want them to take place. Application of the benefits of any program, even one as broad as the space program, remain the responsibility of teams of leaders in every community.

I sense a real urgency on the part of New England to make the most of these opportunities. This Northeastern Commerce and Industry Exposition is obviously a step in this direction

Development and utilization of regional capabilities will involve effort to match industry and talents and capacity to NASA's requirements. This can bring the seller and the buyer together under good market conditions, but the space program is a highly competitive one, and the seller must be prepared to compete to the fullest.

We want your help. Our procurement people, and our new office here, will show you how to compete. But they cannot compete for you. That you will have to do for yourselves.

Your success in this competition will be determined entirely by what you have to offer. We have a job to do, and we mean to do it. We mean to do it as effectively, as efficiently, as rapidly and as economically as we can. Proven technical competence must always be the primary consideration in the award of NASA work, and, together with the other factors mentioned, will determine where, and by whom, the work will be done.

Beyond this, it should be pointed out that as competence develops throughout the nation in the new and complex fields which are involved, we will be confronted increasingly with situations in which several contractors of almost equal competence may be in competition.

As responsible government officials, once the performance requirements of our activity have been met, we have an obligation to consider other questions of national interest in making contract awards.

These would include questions involving regional economic conditions, employment, problems of small business, and other concerns of similar nature which are important to the United States.

But I repeat: these conditions must and will be secondary to our major responsibility -- the utilization of our financial and human resources to insure, most effectively, that the United States will achieve real and enduring superiority in space.